tuberculous material to first find its way into the circulation and then to be deposited at a site of lessened resistance. This explains why the tubercle bacilli can be found so frequently in these cases. The age of the patient and the duration of the process have little to do with the frequency with which the bacilli are found in the blood, and the finding of them has little to do with the question of the prognosis. The most important question that can be raised is as to whether the presence or absence of the bacilli can aid in the differential diagnosis. In one of Krabbel's cases the positive findings of the bacilli made the diagnosis certain before the histological examination of a specimen obtained at the operation furnished proof of the tuberculous nature of the condition. Krabbel believes that in cases in which there is not yet a clinically demonstrable lung tuberculosis, to point to a bacillemia, the positive findings of the bacilli can be of great importance in making the diagnosis certain.

A Contribution to the Anatomy and Pathology of Striped Muscle Fibers. Experimental Studies on the Theories Concerning Muscle Paralysis and Contracture.—Kroh (*Deut. Zeitschr. f. Chir.*, 1913, cxx, 302 and 471) undertook an experimental study of ischemic muscle changes, being stimulated by the previous work of his chief, Bardenheuer, on the same condition. Ischemic contracture is a chronic condition resulting from connective tissue changes and consequent contraction. It is not due exclusively, as generally thought, to the direct influence of a transitory or long continued partial deprivation of oxygen and nourishment, nor is it due exclusively to the toxic effect of an overcharge with carbon dioxide. An important factor is the inactivity of the muscle, induced by the above mentioned directly damaging influences. The circulatory disturbances resulting from these begin and the inactivity completes the process of degenerative change. The circulatory disturbances may be due to a total interruption of the circulation for several hours by constriction of the limb or the occlusion of a large arterial trunk. In such cases a sufficient collateral circulation develops to prevent gangrene. Above all, the interstitial effusion of blood and lymph should be emphasized, since it increases the interstitial pressure. Substantial afferent and efferent branches may succumb to large interstitial effusions. Hemorrhage from very small vessels may lead to total compression of the largest arteries and veins. The efforts at expansion of small, otherwise unimportant interstitial effusions, may prove dangerous when resisted by some unyielding resistance. Thus a plaster of Paris cast may lead to most severe disturbances of the circulation, in some cases even to gangrene. The primary damaging influence of free effusions comes from the occlusion of smaller or larger arterial paths as well as from the suppression of the terminal collateral branches, not wounded but subject to venous pressure. The latter is especially worthy of attention because the retardation in the arterial capillaries interferes with the supply of oxygen and other nourishment and is combined with the direct toxic effect on the tissues which is most marked in the venous system from carbon dioxide. With inactivity the transforming strength of muscle movement is eliminated. In muscle movements are included the active and passive, and included among the latter are massage, passive gymnastics, and electricity. They stimulate the circulation of the blood and lymph and may be a factor in the preservation of the extremity threatened by the stasis. The part played by the nerves in ischemic muscle contracture is difficult to determine.

Acute Gastric Ulcers Perforating into the Peritoneal Cavity.—WAGNER (*Deut. Zeitschr. f. Chir.*, 1913, cxx, 438) says that the only rational treatment for these cases is early operation. Operation within twelve hours gives a favorable prognosis, but after this time the prognosis becomes rapidly unfavorable. Since, however, cases with late peritonitis have been saved by operation, this becomes the last resort in late cases. As soon as a severe symptom is recognized, indicating an acute severe disease in the abdomen, as appendicitis, perforation of the intestine, gall-bladder, etc., the patient should be assigned to the surgeon. Only through early operation can the still frightful mortality be further reduced. By exact attention to the history and symptoms, among which the inital pain and muscle defence occupy first place, an exact diagnosis is possible in two-thirds of the cases. Morphine is to be avoided. Weakness is not a contraindication to immediate operation. The simplest, most quickly performed and, therefore, the most rational operation is the closure of the perforation by the Lembert suture, with or without freshening of the edges, and reinforcement by suturing over it a portion of the omentum. Gastro-enterostomy is indicated only in the presence of a pyloric obstruction or an hour-glass stomach. Excision or resection, as a rule, makes too great a demand upon the strength of the patient. If suture is impossible it may be replaced by covering the perforation by omentum or a gauze tampon. For the cleansing of the unclean peritoneal cavity, the best treatment is the sparing irrigations with warm physiological saline solution without unnecessary mechanical insult of the peritoneum. With less escape of the gastro-intestinal contents, a sponging out will be sufficient. Drainage with rubber tubes rarely does damage, but frequently prevents retention of secretions and abscess formation. In the after-treatment, the stomach should be spared by the copious administration of physiological salt solution, subcutaneously and by the rectum.

Subcutaneous Contusions of the Pancreas.—HAGEDORN (*Zentralbl. f. Chir.*, 1913, xl, 124) saw last summer, almost at the same time, 2 cases of subcutaneous contusions of the pancreas, in each of which operation was performed and the pancreas exposed. While much has been published on pancreatic diseases in recent years, little has been written of the injuries, especially of the isolated subcutaneous contusions of the pancreas. Both cases were very similar as to the kind of trauma at fault and the symptomatology, although one came to operation in the acute stage, the other later. In the first case three days before admission, the wheel of a heavy wagon passed over the upper part of the abdomen. The patient soon began to vomit and to be very ill and was taken to the hospital. The vomit was dark, the abdomen distended, tympanitic and slightly tender, pulse small and rapid, temperature normal, urine free of albumin and sugar, and there had been no passage of feces or flatus for several days. Gastric irrigations brought up considerable dark fluid contents, and some